APPENDIX C
INTERLABORATORY CORRELATION TESTING

GENERAL

Each District Laboratory shall establish and maintain their testing credibility by following the correlation-testing program described herein. The testing precision data listed in this IM shall apply to correlation of test results between the Iowa DOT and a contractor's laboratory.

CORRELATION SAMPLE

The remaining portion of a project control sample may be submitted to the Central Laboratory for testing. This sample shall be re-identified showing the intended use to be: Correlation testing, project number, and department information.

Samples to be tested in the correlation program between the CML and the District Laboratory shall be distributed by the CML.

CORRELATION FREQUENCY

Each District Laboratory shall correlate the following tests normally at the frequencies listed below. The frequency may be increased for problem situations at the discretion of the District Materials Engineer.

Test	Frequency
DSR Stiffness G*/sin delta	monthly
G_{mb}	monthly
G_{mm}	monthly
Ignition oven P_b	monthly
Ignition oven gradation	monthly
Combined gradation	monthly
G_{sb}	Every other month
% Abs	Every other month
FAA	Every other month
Sand Equivalent	Once every 3 months

TESTING PRECISION (Difference Between Two Laboratories)

1. Asphalt Binder

   a. Penetration. The two results shall not differ from their mean by more than 8 percent of their mean.

   b. Absolute Viscosity. The two results shall not differ from their mean by more than 10 percent of their mean.

   c. Specific Gravity. The two results shall not vary by more than 0.005.

   d. DSR Stiffness. The two results shall not differ from their mean by more than 10 percent of their mean.

2. Emulsified Asphalt

   a. Percent Residue. The two results shall not differ by more than 2 percent.

3. Cut-Back Asphalt

   The two results shall not differ from their mean by more than 3 percent of their mean for material having a viscosity of less than 800 cst and 9 percent of their mean for material having viscosity between 800 to 6000 cst.

4. Hot Mix Asphalt Mixture

   a. Binder Content by Extraction. The two results shall not differ by more than 0.3 percent.

   b. Gradation of Extracted Aggregate. The two results shall meet the precision parameters prescribed in IM 216.

   c. Marshall and Gyratory Density. The two results shall not differ by more than 0.020.

   d. Maximum Specific Gravity. The two results shall not differ by more than 0.010.

5. Aggregate

   a. Gradation of Combined Aggregate. The two results shall meet the precision parameters prescribed in IM 216.

   b. Bulk Dry Specific Gravity for Mix Design. The difference between the two results shall not be more than 0.028.

   c. Absorption of Aggregate for Mix Design. The difference between the two results shall not be more than 0.37 percent.

   d. Apparent Specific Gravity for Mix Design. The difference between the two results shall not be more than 0.010.

e. Fine Aggregate Angularity. The difference between the two results shall not be more than 0.5.

Other tests such as kinematic viscosity, specific gravity of asphalt binder and penetration of emulsion residue may be correlated at the discretion of the District Materials Engineer.